

SUBSTITUTE FORM PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 04799/045001	SERIAL NO. 09/077,835		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		APPLICANT Britton Chance					
		FILING DATE June 4, 1998		GROUP 3733			
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA		5 4 2 0 6 0 7	05/30/95	Miller et al.			
AB							
AC							
AD							
AE							
AF							
AG							
AH							
AI							
AJ							
AK							
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION							
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION
AL		0 280 986 A1	07.09.88	Europe			YES NO
AM		DD 227 044 A1	14.09.85	Germany			
AN		DE 44 10 888 A1	05.10.95	Germany			
AO							
AP							
OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)							
AO							
AR							
AS							
EXAMINER	<i>Ruth Smith</i>			DATE CONSIDERED		9/05	
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

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(37 CFR 1.98(b))		U.S. PATENT DOCUMENTS			

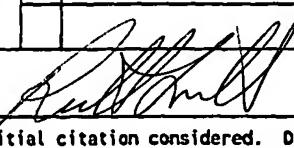
EXAMINER INITIAL	PATENT NUMBER		ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA	3 0 6 8 7 4 2		12/18/62	Hicks, Jr. et al.	88	14	06/15/59
AB	3 2 2 9 6 8 5		01/18/66	Ringkamp et al.	128	2.05	08/30/65
AC	3 4 1 2 7 2 9		11/26/68	Smith, Jr.	128	2.05	08/30/65
AD	3 4 6 1 8 5 6		08/19/69	Polanyi	128	2	10/23/65
AE	3 6 3 8 6 4 0		02/01/72	Shaw	128	2R	11/01/67
AF	3 9 9 8 5 5 0		12/21/76	Konishi et al.	356	39	10/10/75
AG	4 0 8 6 9 1 5		05/02/78	Kofsky et al.	128	2L	05/25/76
AH	4 1 3 8 7 2 7 1		02/06/79	Mantz	364	525	10/31/77
AI	4 1 6 2 4 0 5		07/24/79	Chance et al.	250	461	05/23/78
AJ	4 1 6 7 3 3 1		09/11/79	Nielsen	356	39	12/20/76
AK	4 2 2 3 6 8 0		09/23/80	Jöbsis	128	633	03/05/79
AL	4 2 8 1 6 4 5		08/04/81	Jöbsis	128	633	06/26/77
AM	4 3 2 1 9 3 0		03/30/82	Jöbsis et al.	128	633	09/18/80
AN	4 3 8 0 2 4 0		04/19/83	Jöbsis et al.	128	633	08/03/81

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

	DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	TRANSLATION	
				YES	NO
AO	WO 92/20273	11/26/92	PCT		
AP	WO 96/20638	07/11/96	PCT		

OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

AN	Chance et al., "Photon Migration in Muscle and Brain," Photon Migration in Tissues, Plenum Press, pp. 121-135, 1989, Chance, B., ed.		
	Cui et al., "Experimental Study of Migration Depth for the Photons Measured at Sample Surface," SPIE, 1431:180-191, 1991.		
AP	SUPPLICANT		
AO	SUPPLICANT		

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EXAMINER INITIAL	PATENT NUMBER							ISSUE DATE	PATENTEE		CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
BA	3	7	0	9	6	1	2	01/09/73	Clemens		356	178	03/10/71
BB	3	8	6	6	5	9	9	02/13/75	Johnson		128	2 L	01/21/72
BC	3	9	9	4	5	8	5	11/30/76	Frey		356	40	08/11/75
BD	4	1	1	9	4	0	6	10/10/78	Clemens		422	81	05/06/76
BE	4	4	1	6	2	8	5	08/13/81	Shaw et al.		128	634	11/22/83
BF	4	5	1	0	9	3	8	04/16/85	Jöbsis et al.		128	633	01/24/83
BG	4	6	1	2	9	3	8	09/23/86	Dietrich et al.		128	665	09/06/83
BH	4	8	0	0	8	8	5	1/31/89	Johnson		128	633	12/02/87
BI	4	8	0	5	6	2	3	02/21/89	Jöbsis		128	633	09/04/87
BJ	4	8	2	4	2	4	2	4/25/89	Frick et al.		356	41	09/26/86
BK	4	8	4	6	1	8	3	4/11/89	Martin		128	633	12/02/87
BL	4	9	0	8	7	6	2	3/13/90	Suzuki et al.		364	413.09	05/02/88
BH	4	9	7	2	3	3	1	11/20/90	Chance		364	550	02/06/89
BN	5	0	9	0	4	1	5	02/25/92	Yamashita et al.		128	665	01/11/91
BO	5	1	0	6	3	8	7	4/21/92	Kittrell et al.		606	15	09/21/89
BP	5	1	1	9	8	1	5	6/9/92	Chance		128	633	12/21/88
BQ	5	1	8	7	6	7	2	2/16/93	Chance et al.		364	550	01/22/91
BR	5	1	9	0	0	3	9	03/02/93	Takeuchi et al.		128	633	12/05/90
BS	5	3	0	0	0	9	7	04/05/94	Lerner et al.		607	93	09/18/92
BT	5	3	5	8	5	0	3	10/25/94	Bertwell et al.		606	27	01/25/94
BU	5	5	5	1	4	2	2	09/30/96	Simonsen et al.		128	633	07/06/94

OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

BO	Greenfield, "A Tissue Model For Investigating Photon Migration in Trans-Cranial Infrared Imaging," <i>Photon Migration in Tissues</i> , Plenum Press, B. Chance, ed., pp. 147-168, 1989.											
BP	Sevick et al., "Analysis of absorption, scattering, and hemoglobin saturation using phase modulation spectroscopy," <i>SPIE</i> , 1431:264-275, 1991.											
BQ	Sevick et al., "Photon migration in a model of the head measured using time- and frequency- domain techniques: potentials of spectroscopy and imaging," <i>SPIE</i> , 1431:84-96, 1991.											
BR	Weng et al., "Measurement of Biological Tissue Metabolism Using Phase Modulation Spectroscopy Technology," <i>SPIE</i> , 1431:161-171, 1991.											

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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
CA		5 0 8 8 4 9 3	02/18/92	Giannini et al.			
CB		5 4 0 8 0 9 3	04/18/95	Ito et al.			
CC		5 5 9 6 9 8 7	01/28/97	Chance			
CD		5 6 2 5 4 5 8	04/29/97	Alfano et al.			
CE		5 6 5 5 5 3 0	08/12/97	Messerschmidt			
CF		5 7 0 6 8 2 1	01/13/98	Matcher et al.			
CG							
CH							
CI							
CJ							
CK							
CL							
CM							
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION							
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION
CN		WO 94/16615	04.08.94	PCT			YES
CO		0 290 279	09.11.88	Europe			NO
CP		0 233 108 A1	19.08.87	Europe			
CQ		0 467 459 A2	22.01.92	Europe			
OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)							
CR							
EXAMINER <i>Britton Chance</i>				DATE CONSIDERED 9/05			
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Sheet 1 of 3

FORM PTO-1449 (Modified)		ATTY. DOCKET NO.: N1-045002	SERIAL NO.: 10/658,735
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		APPLICANT: Britton Chance	
		FILING DATE: September 9, 2003	GROUP:

U.S. PATENT DOCUMENTS

Exam Init.	Ref Des	Document No.	Date	Name	Class	Sub Class	FILING DATE If Appropriate
		2,688,971	09/14/54	Daniels et al.	607	79	09/13/50
		3,088,742	12/18/62	Hicks, Jr. et al.	88	14	06/15/69
		3,229,685	01/18/68	Ringkamp et al.	128	2.05	08/30/65
		3,412,729	11/26/68	Smith, Jr.	128	2.05	08/30/65
		3,461,856	08/19/69	Polanyi	128	2	10/23/65
		3,638,640	02/01/72	Shaw	128	2R	11/01/67
		3,709,612	01/09/73	Clemens	358	178	03/10/71
		3,866,599	02/13/75	Johnson	128	2L	01/21/72
		3,994,585	11/30/76	Frey	356	40	08/11/75
		3,998,650	12/21/76	Konishi et al.	356	39	10/10/76
		4,088,915	05/02/78	Kofsky et al.	128	2L	05/25/76
		4,119,406	10/10/78	Clemens	422	81	05/06/76
		4,138,727	02/08/79	Mantz	364	525	10/31/77
		4,182,406	07/24/79	Chance et al.	250	481	05/23/78
		4,167,331	09/11/79	Nielsen	366	39	12/20/76
		4,223,680	09/23/80	Jöbsis	128	633	03/05/79
		4,281,645	08/04/81	Jöbsis	128	633	08/26/77
		4,321,930	03/30/82	Jöbsis et al.	128	633	09/18/80
		4,380,240	04/19/83	Jöbsis et al.	128	633	08/03/81
		4,416,285	11/22/83	Shaw et al.	128	634	11/22/83
		4,510,938	04/16/85	Jöbsis et al.	128	633	01/24/83
		4,612,938	09/23/86	Dietrich et al.	128	665	09/06/83
		4,800,885	01/31/89	Johnson	128	633	12/02/87
		4,805,623	02/21/89	Jöbsis	128	633	09/04/87
		4,824,242	04/25/89	Frick et al.	356	41	09/26/88
		4,848,183	07/11/89	Martin	128	633	12/02/87
		4,908,762	03/13/90	Suzuki et al.	364	413.09	05/02/88
		4,972,331	11/20/90	Chance	364	550	02/06/89
		4,978,186	12/16/90	Mori	385	31	07/17/89
		5,088,493	02/18/92	Giannini et al.	600	323	02/16/88
		5,090,415	02/25/92	Yamashita et al.	128	665	01/11/91
		5,106,387	04/21/92	Kittrell et al.	606	15	09/21/89
		5,119,815	06/09/92	Chance	128	633	12/21/88
		5,187,872	02/16/93	Chance et al.	364	550	01/22/91

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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	APPLICANT: Britton Chance	GROUP:

U.S. PATENT DOCUMENTS

Exam Init	Ref Des	Document No.	Date	Name	Class	Sub Class	FILING DATE If Appropriate
		5,190,039	03/02/93	Takeuchi et al.	128	633	12/05/90
		5,300,097	04/05/94	Lerner et al.	607	93	09/18/02
		5,358,503	10/25/94	Bertwell et al.	608	27	01/25/94
		5,408,093	04/18/95	Ito et al.	250	227.26	03/11/94
		5,420,607	05/30/95	Miller et al.	345	158	04/06/94
		5,551,422	09/30/96	Simonsen et al.	128	633	07/08/94
		5,596,987	01/28/97	Chance	600	310	01/03/95
		6,626,458	04/29/97	Alfano et al.	356	446	02/03/95
		5,855,530	08/12/97	Messerschmidt	600	366	08/09/95
		5,706,821	04/13/98	Matcher et al.	600	310	12/30/94
		5,987,351	11/16/99	Chance	600	473	10/06/97
		6,496,718	12/17/02	Lonky	600	476	06/12/00
		6,818,614	09/09/03	Chance	600	473	09/08/98

FOREIGN PATENT DOCUMENTS

EXAMINER <i>Ruthwell</i>	DATE CONSIDERED 9/05
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Sheet 3 of 3

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO.: N1-045002	SERIAL NO.: 10/658,735
	APPLICANT: Britton Chance	
	FILING DATE: September 9, 2003	GROUP:

OTHER ART

(Including Author, Title, Date, Pertinent Pages, Publication, Etc.)

EXAMINER <i>Ruth H. Mull</i>	DATE / CONSIDERED 9/05
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		3,229,685	01/18/66	Ringkamp et al.	128	205	08/30/65
		3,412,729	11/26/68	Smith, Jr.	128	205	08/30/65
		3,461,856	08/19/69	Polanyi	128	2	10/23/65
		3,638,640	02/01/72	Shaw	128	2R	11/01/67
		3,709,612	01/09/73	Clemens	356	178	03/10/71
		3,866,599	02/13/76	Johnson	128	2L	01/21/72
		3,994,585	11/30/76	Frey	356	40	08/11/75
		3,998,550	12/21/76	Konishi et al.	356	39	10/10/75
		4,086,915	05/02/78	Kofsky et al.	128	2L	05/25/76
		4,119,406	10/10/78	Clemens	422	81	05/06/76
		4,138,727	02/06/79	Mantz	364	525	10/31/77
		4,162,405	07/24/79	Chance et al.	250	461	05/23/78
		4,167,331	09/11/79	Nielsen	356	39	12/20/76
		4,223,680	09/23/80	Jöbsis	128	633	03/05/79
		4,281,645	08/04/81	Jöbsis	128	633	06/26/77
		4,321,930	03/30/82	Jöbsis et al.	128	633	09/18/80
		4,380,240	04/19/83	Jöbsis et al.	128	633	08/03/81
		4,416,285	11/22/83	Shaw et al.	128	634	11/22/83
		4,510,938	04/16/85	Jöbsis et al.	128	633	01/24/83
		4,612,938	09/23/86	Dietrich et al.	128	665	09/06/83
		4,800,885	01/31/89	Johnson	128	633	12/02/87
		4,805,623	02/21/89	Jöbsis	128	633	09/04/87
		4,824,242	04/25/89	Frick et al.	356	41	09/26/86
		4,846,183	07/11/89	Martin	128	633	12/02/87
		4,908,762	03/13/90	Suzuki et al.	364	413.09	05/02/88
		4,972,331	11/20/90	Chance	364	550	02/06/89
		4,978,186	12/18/90	Mori	366	31	07/17/89
		5,088,493	02/18/92	Giannini et al.	600	323	02/16/88
		5,090,415	02/25/92	Yamashita et al.	128	665	01/11/91
		5,108,387	04/21/92	Kittrell et al.	608	15	09/21/89
		5,119,815	06/09/92	Chance	128	633	12/21/88
		5,187,672	02/16/93	Chance et al.	364	550	01/22/91

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RU		6,190,039	03/02/93	Takeuchi et al.	128	633	12/05/90
		5,300,097	04/05/94	Lerner et al.	607	93	09/18/92
		5,358,503	10/25/94	Bertwell et al.	606	27	01/25/94
		6,408,093	04/18/95	Ito et al.	250	227,26	03/11/94
		5,420,807	05/30/95	Miller et al.	345	156	04/06/94
		5,551,422	09/30/96	Simonsen et al.	128	633	07/06/94
		5,596,987	01/28/97	Chance	600	310	01/03/95
		5,625,458	04/29/97	Alfano et al.	358	446	02/03/95
		5,655,530	08/12/97	Messerschmidt	600	366	08/09/95
		5,706,821	01/13/98	Matcher et al.	600	310	12/30/94
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RU		6,496,718	12/17/02	Lonky	600	476	05/12/00
		6,618,614	09/09/03	Chance	600	473	09/08/98

FOREIGN PATENT DOCUMENTS

	Country & Doc. No. (11)	Pub. Date (43)		Class	Sub Class	Translation Yes	No
RU	227 044 A1	09/1985	DE				
	44 10 888	10/1995	DE				
	0 233 108 A1	19/08/87	Europe				
	0 280 988 A1	07/09/88	Europe				
	0 290 279	09/11/88	Europe				
	0 487 459 A2	22/01/92	Europe				
	WO 92/20273	11/26/92	PCT				
	WO 94/16615	04/08/94	PCT				
RU	WO 96/20638	07/11/96	PCT				

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OTHER ART

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EXAMINER <i>Rutherford</i>	DATE CONSIDERED 9/35
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